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EXAMINING DIFFERENCES BETWEEN MANDARIN CHINESE AND ENGLISH
SPEAKERS IN GENDER STEREOTYPE REGARDING DAILY LIFE ACTIVITIES

By

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Permission

Title: Examining Differences Between Mandarin Chinese and English Speakers in Gender Stereotype Regarding Daily Life Activities

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Abstract

The terms *gender* and *sex* in both western and Chinese culture, and professional area, seems complex and sometimes confusing. Previous studies have examined gender expectation within (Kroska, 2003) and across (Baxter, 1997; Zhou, Dawson, Herr, & Stukas, 2004) cultures, and many have focused on traits of different genders, especially Bem's (1974) measurement which has been widely discussed. In order to explore the difference between Mandarin Chinese and English speakers on gender stereotype, an online survey with English and simplified Chinese language version was conducted. Twenty-one daily life activities were examined in this survey to measure gender stereotype. Data was mainly collected from American and Chinese social media, and from advertisements at some universities in both countries. The results show that English speakers had a lower variance of scores on gender expectations according to the twenty-one daily life activities than Chinese speakers did, suggesting Chinese speakers hold stronger gender stereotypes. There was no effect for *sex at birth* and no interaction between language and sex. Future studies could examine other differences in beliefs about gender stereotype that may occur between cultures.

Keywords: gender stereotype; culture; daily life activities

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Introduction

Judd and Park (1993) defined stereotype as the individual's beliefs about characteristics or attributions attached to a group; it is not necessarily negative, or prevalently shared. Using their definition, gender stereotype can be defined as when individuals attach certain characteristics or traits to a certain type of gender. Gender stereotype limit people's imagination on possibilities about what a certain type gendered people can or cannot do, including self and others. It can include positive aspects like caring or confidence, but also negative aspects like discrimination or restriction.

The use of terms sex and gender in Western and Chinese culture also within the professional area, development of gender awareness and expectation, previous research within and across cultures are discussed in the part of literature review. Previous studies on gender stereotype have mainly focused on traits and personalities, and many of these created measurements according to authors' cognition about gender stereotype on these topics. We wanted to explore gender stereotype in daily life activities according to how people naturally think about these questions. Moreover, previous research on gender stereotypes often has data collected from college students, but we want to explore the difference between Chinese and English speakers in general population, not restricted by education level, age, and geographic location.

Literature Review

Definition of Gender and Sex in Different Culture

In Western culture, *gender* and *sex* are similar to each other and ambiguous. Muehlenhard and Peterson (2011) found that the distinction between gender and sex can be traced back to 1950s when John Money and his colleagues used the term *gender identity* and *gender role* to describe the psychological state and function that separate from biological sex. In psychology education and research, Basow (2010) noticed that many of the psychology textbooks from 1975 to 2010 have replaced sex with gender, and the term gender referred to social meaning rather than the biological distinction suggesting that psychologists were becoming more precise on using these two terms. Muehlenhard and Peterson (2011) summarized the definitions of sex and gender by reserving sex for discussions of sexual behavior and biological characters, while gender is used to discuss traits, characteristics, and performance according to social group or categories. Similarly, Frieze and Chrisler (2011) discussed the editorial policy on the use of the term sex and gender in an article published in the journal *Sex Roles*. They encourage their authors to use gender, because it contains broader meaning than sex when doing research in our society, and usually people do not know their sex chromosome type. In fact, they also agreed that this journal would be better and more precise to be titled *Gender Roles*, though they admitted that if they changed the title, it would confuse their readers and also negate their decades of history.

In Chinese culture, if it is not explicitly stressed as separated between psychological state and physical/biological condition, gender and sex are usually translated into the same word in Chinese “性别 (xìngbié)” in daily life. If literally translated the Chinese term, “性 (xìng)” means sex/gender or quality, and “别 (bié)” means distinguish, separate, or other. When people use “性别 (xìngbié)” in daily communication and political documents, it means the biological sex of that person. In Chinese culture, there are no such words to differentiate gender as a psychological state separate from sex. People usually use “心理 (xīnlǐ)” which means psychological or “社会 (shèhuì)” which means social to modify “性别 (xìngbié)”. “心理性别 (xīnlǐ xìngbié)” tends to stress the psychological state of a person, and “社会性别 (shèhuì xìngbié)” tends to stress gender role in society. Even in the professional area, these two terms are used differently according to different scholars. Zhang (2014) wrote, “the gender (male to female) ratio of the Chinese suicide rates is different from those found in the rest of the world” (p. 146). According to this article, gender here actually refers to biological sex instead of the psychological state, since the information came from government documents regarding biological sex instead of gender.

Similarly, in both Western and Chinese culture, even in the professional area, the use of gender and sex are not standardized. It is necessary for us to clarify our opinions on using these two terms. Basically, we consider sex as the biological/physical condition of a person (including sex chromosome, internal and external sex organs); and gender as

a different aspect to describe a person's traits, preferences and behaviors that are not necessarily based on different sexes.

Development of Gender Awareness and Expectation

In a review of previous research on children and adults, Biernat (1991) summarized that toddlers begin to classify themselves with others of the same sex through both self-awareness and socialization, which comes from sex/gender stereotype on the preference of the objects around them in their daily life. Younger children may not be able to clearly differentiate between the two most commonly accepted genders (i.e., masculine and feminine) when they lack social exposure (Biernat, 1991). Children between the ages of 2 to 5 years become aware of gender stereotypes related to their daily life activities. By the ages of 4 to 5, children began to develop occupational goals related to gender stereotypes. In Auster and Mansbach's study (2012), they found out that the toys sold online at the Disney Store have specific colors according to stereotyped kinds of toys for girls and boys, like blue trucks for boys and pink dolls for girls. This means that the stereotyped pairs are preset by adults, because the toys were designed and manufactured by adults. If a boy wants a pink truck, he likely cannot find one in any store.

Egan and Perry (2001) developed three measurements to examine gender identity in middle childhood, which included the relations between perceived gender compatibility and pressure for sex typing, and personal and social adjustment in preadolescents. They proposed that gender identity is a multidimensional concept which contains gender identity classification, the level of satisfaction of own sex and gender appropriateness, and the flexibility on cross-sex options. They found that gender

typicality and gender contentedness are associated with favorable adjustment, whereas feeling pressure and intergroup bias are associated with unfavorable adjustment.

According to Mandara, Murray, and Joyner's (2005) research on African American adolescents' gender role development, when compared to father-present adolescents, father-absent adolescents develop less traditional gender role orientations, especially in lower-income families. A lack of father's traditional socialization strategies seems to have different impacts on boys and girls. Boys develop less masculine traits, possibly because of the lack of physical demands from fathers. Girls develop more masculine traits, possibly because they are pushed to share more responsibilities as a consequence of their fathers' absence, although most of them reported that they did not want to be so masculine.

For adults, gender stereotypes reflect on many aspects, such as personality, physical traits, roles, occupations and sex role orientation (Biernat, 1991). Twenge (1997) did a meta-analysis of studies using the Bem Sex Role Inventory (Bem, 1974) and Personal Attributes Questionnaire (Spence & Helmreich, 1978) among U. S. four-year college students. She found a highly significant increase in women's report on masculine traits across time. This change may because of the cultural change such as more women working outside the home, the increasing number of women in higher level education and the increase in participation in sports. Also, she found that women are more versatile in gender roles than men in several ways, and that women adopt more masculine traits compared to how often men tend to adopt feminine traits across time. For example, men usually work outside of the home and wear pants, while women can work outside or at home and wear dresses or pants. Another possibility for this change may be that if young

people do not perceive the items as gender stereotyped, they would be freer to rate themselves in the masculine, feminine and androgyny items. Still, the changing in their perception may originate from cultural change.

Previous Cultural and Cross-cultural Examinations

In Kroska's (2003) study on gender difference of household chores in the United States, she divided chores into three categories: feminine chores (usually need less physical force while more trivial, such as washing dishes, laundry, shopping, preparing meals and cleaning house) and child care; masculine chores (usually need more physical force, such as auto work and yard work); and gender-neutral chores (such as bookkeeping and driving). The result shows a general consistency with gender expectations in that most of women and men relate these chores to gender *properness* (women to feminine chores and men to masculine chores). In a survey on housework, both husbands and wives reported on the husband's responsibility toward housework in Sweden, Norway, the United States, Canada, and Australia; this survey showed an average of 25% of housework was done by the man. Husbands slightly rated more chores being completed by themselves than wives rated their husbands in terms of the proportion of housework that husbands take responsibility for (Baxter, 1997). Even in pop culture like comics, Glascock and Preston-Schreck (2004) reported that although female characters have increased in the comics over past 20 years, their role still more likely to be a caregiver at home. However, they did not look into whether or not there is any difference between male and female cartoonists or writers in expressing their characters, and if there are more females becoming cartoonists or writers within these two decades.

Looking through the modern history of China, the May 4 Movement in 1919 was a milestone when women began to take part in the political movement. The following New Culture Movement adopted the trend from the western culture that advocated democracy and science and considered some Confucian values and conceptions as out of date. After the Chinese Communist Party established the New Marriage Law in the early 1950s, Chinese women began to develop both psychological and financial independence (Zhou et al., 2004), leading to the end of patriarchal Chinese marriage traditions by protecting women's rights of equality in marriage. Although historically China's Empress Wu was the only female monarch in feudal society dating back to late 7th century, women's social status was still low according to the traditional view of the Three Obedience and Four Virtues of Confucianism, which have influenced Chinese for more than 2,000 years. While the Four Virtues (morality, proper speech, modest manner/appearance, and diligent work) are general guidelines to life, the Three Obediences pertain specifically to the role of women, which are: a woman should obey her father as a daughter; her husband as a wife; and her sons in widowhood. This product of a patriarchal society – that women should stay at home and do all the housework and men should work outside, and that women should obey men throughout their life – results in men and women not being equal in social status and marital life.

On March 8th, 2016, International Women's Day, a Chinese consumer goods company advertised 80 new posters on 38 subway trains distributed at 8 main cities in China (Pan, 2016). The slogans were quite impressive with eye-catching illustrations and tips on the marital relationship, parents-children relationship, and the relationship between mothers and daughters-in-law. Some examples of these slogans on the posters

are: ““if you want your wife always young and pretty, do more chores and have less quarrels with her”; “although she can make a lot of money being famous on stage, she still takes care of the children at home”; “even though he has a lot of money, after work and back home he still takes over the laundry and cooking”; “she can dress up like a princess in a party, and can also wear a kitchen apron doing chores at home”” (Diaopai, 2016). These all advocated for modern families to respect, understand, and love each member in their family, and also a more equal division of both work and housework for men and women in the mass media. These posters also showed the support from the Supervision Department of China, since all the advertisements needed to be approved first by this oversight department before being published.

The Bem Sex Role Inventory has been used by many scholars; it is cited over 1500 times in the database PsycINFO. Bem (1974) presented twenty traits to each gender that she attributed to masculine, feminine, and androgyny. By letting the participants rate each trait, Bem (1974) received the results and determined the gender-related traits of each person to see if there is conformity between sex and gender. Previous research on this topic has used different question forms to understand gender stereotypes. For example, Zhou et al. (2004) used 0 to 6 rating scale from Feminine to Masculine. Their question read, “What occupation / housework / responsibility is ... going / enjoy / likely to do,” and let the participants predict both topic and vehicle (the vehicle is usually a person’s name and allows the participants to predict if the name is male, female, or neutral). This prediction of topic and vehicle would tend to reflect the participants’ consideration of what is proper for others, instead of what is proper for

themselves. People may have double standards on some indicators when they think of others versus when they think of it for themselves.

Based on previous studies on both cultures, one of the hypotheses of this project is that Chinese speakers would be more gender stereotyped than English speakers. Sex is the most common demographic to examine in many types of research, so we also include it in our analysis to see if there is a difference between sexes on gender stereotypes, based on the history of Chinese women's equality and women's rights only being socially advocated for less than a century. In some rural areas and the southeast of mainland China, people still think that women are lower than men in social status, and in families. Western culture is more open-minded to this topic, but if the equality already exists, there is no need for advocating. A more specific prediction on sex at birth to gender stereotype in this project would be that in Mandarin Chinese speakers, females are less gender stereotyped than males, while in English speakers, males and females have the same level of gender stereotype

Method

Participants

In total, 93 people participated in this study. Thirty-nine (10 males, 29 females) are native English speakers aged from 18 to 63 ($M = 28.6667$). Participants were recruited via posters on the bulletin boards or announcements in psychology classes from a midsized, public university and social media websites which included Facebook, Tumblr, Twitter and Reddit. Fifty-four (19 males, 35 females) of the participants are native Chinese speakers aged from 18 to 61 ($M = 27.4150$), all collected from Chinese social media websites which included Guokr, Douban and Weibo.

Of the English speakers, mainly from the U.S., 32 identified themselves as Caucasian, 1 as African American, 1 as Hispanic, and 5 other unspecified categories. The participants who took the Simplified Chinese survey were mainly from the People's Republic of China, with others living in the U.S, UK, Switzerland, Canada and Germany. Most identified themselves as Han (the majority ethnic group in Mainland China), while only 11% are from minority ethnic groups including 3 as Zhuang, 2 as Manchu, and 1 as Mongol.

Procedures

IRB approval was obtained before the study began. The survey was posted on QuestionPro.com in two versions: English and Simplified Chinese. Consent appeared at the first page before participants began the questionnaire. Question topics included: gender-appropriateness based on daily life activities, demographics (including year and month of birth, country of origin, primary residence before 18 years old, biological sex at birth and current race, ethnicity, and other questions not examined in this paper. The type

of the questions varied including Likert scale and open-ended box. The data of participants who were younger than 18 years old were excluded because they were not of legal age to sign the consent form.

Measures

First, gender expectations were examined in this survey. Unlike Bem (1974), we asked the participants to decide which activity goes to which category (masculine vs. feminine). We structured the question in a form that let the participants designate whom they think should do the activity using a 5-point Likert scale. The question read: Please indicate whom should do each of the following activities: (1) *always men*; (2) *men more often than women*; (3) *either, it does not matter*; (4) *women more often than men*; and (5) *always women*. The activities included sewing; cooking; car repairing; woodworking; taking care of kids; art; video games; singing/music; gardening; comedy; yoga; weight lifting; aerobics; football; cheerleading; basketball; washing dishes; doing laundry; cleaning the house; taking out the trash; taking care of pets. This was used because we wanted to know what people think of their own gender expectations instead of how they think others' gender expectation. Also, compared to a 0-6 point Likert scale Zhou et al. (2004) used, a 5-point scale already included a neutral option and enough to explain all the conditions. Compared to Baxter's (1997) questions, we included more daily life activities rather than just housework to better generalize the results.

In order to find a numeric way to describe the variable *gender stereotype strength*, we calculated the variance of each participant's scores on the 21 daily activities. We reasoned that, the higher the variance, the stronger the stereotype because when a participant rates more scores on 1 or 5 (which indicated the activities should be done by

always man or always woman) this means they tend to have a stronger gender stereotype on the activities. If they rate more scores on 3 (which indicated either gender could perform the activities), the variance would be smaller than those who rate more scores on 1 or 5. After examining basic descriptive statistics, we compared the variance between Mandarin Chinese and English speakers. Second, we did a two-way ANOVA to explore whether there is an interaction between *sex at birth* and *language* (Chinese and English) on *gender stereotype strength*.

Results

Descriptive Statistics

The distribution of variances was positively skewed (see Figure 1), with mean = .3936, median = .2905, mode = 0, standard deviation = .37318, variance = .139.

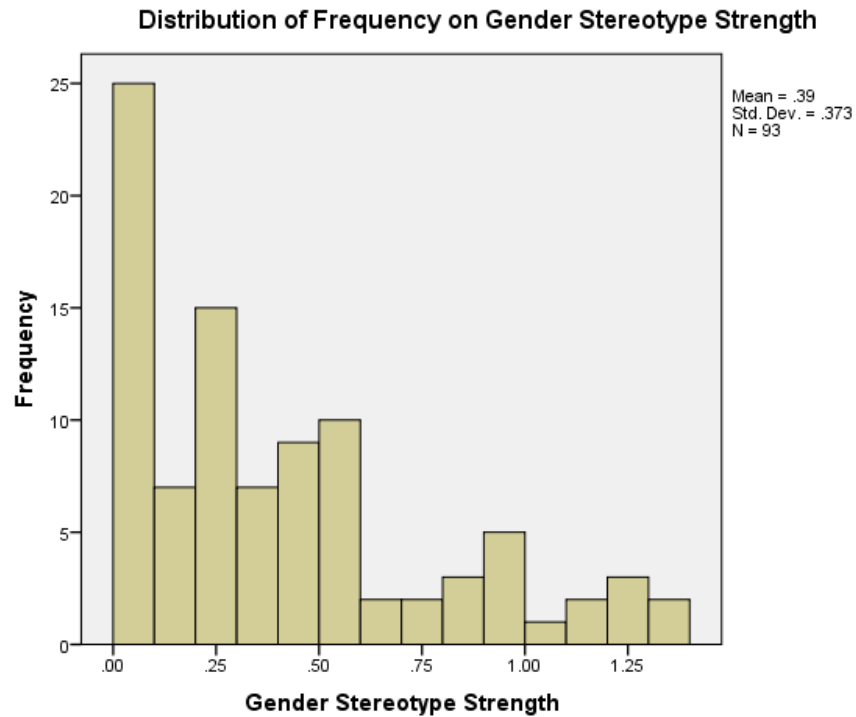


Figure 1

Independent Samples *t*-test Between Mandarin Chinese and English Speakers

An independent samples *t*-test was conducted to examine the difference in individual variance of scores on gender expectations according to different daily life activities between English speakers and Chinese speakers. The result showed a significant difference between English and Chinese speakers ($t_{91.195} = 4.335$, $p < .001$). English speakers ($M = .2185$, $SD = .29602$) had lower variances (i.e. less gender stereotype) than Chinese speakers ($M = .5201$, $SD = .37424$).

Sex at Birth x Language ANOVA results

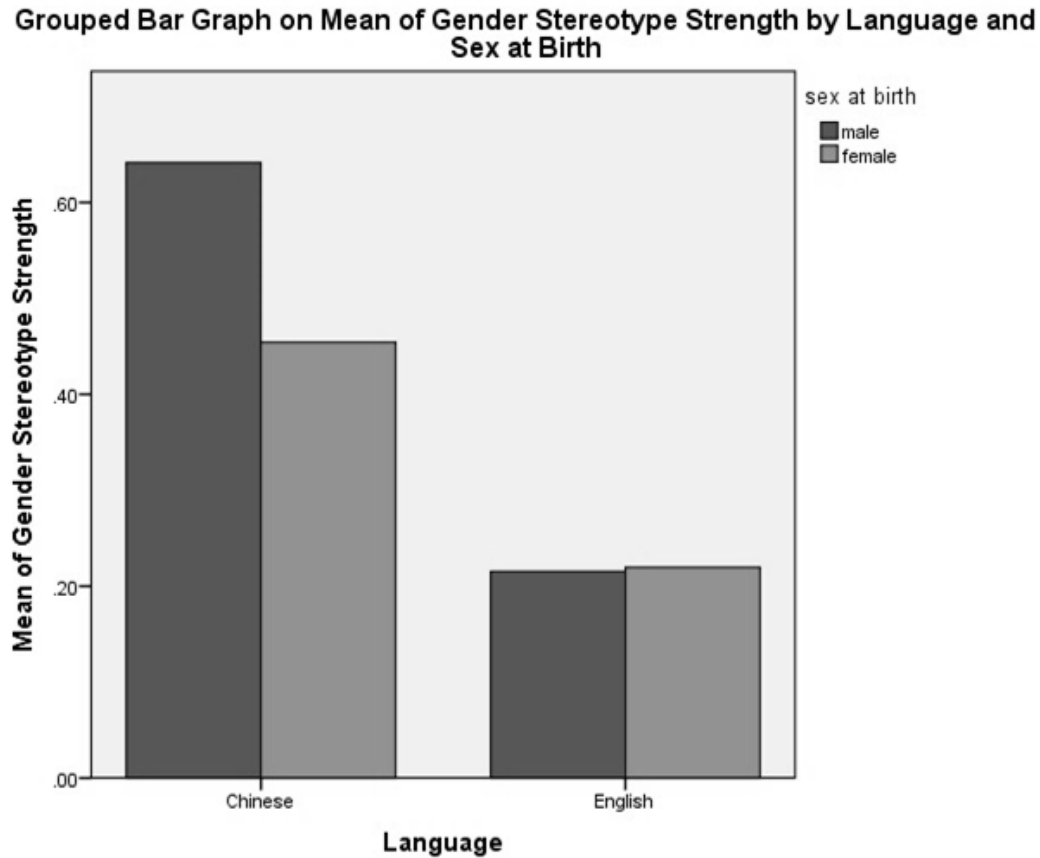


Figure 2

A two-way ANOVA was used to explore whether there is an interaction between sex at birth and the two different languages speakers (English/Chinese) on gender expectations according to daily life activities. As expected, based on the independent-samples t-test, there was a significant main effect for language ($F_{1, 89} = 17.462, p < .001$). However, there was no significant main effect for sex at birth ($F_{1, 89} = 1.34, p = .250$), nor was there a significant interaction ($F_{1, 89} = 1.472, p = .228$). The difference between Mandarin Chinese and English speakers is obviously shown in the graph, Mandarin Chinese speaker shows a higher gender stereotype strength level than English speakers. A grouped bar graph (see Figure 2) shows a trend for Mandarin Chinese speaking males

to have a slightly higher gender stereotype strength level than females, while in English speaking participants, males and females have almost the same gender stereotype strength level, however, this interaction was not significant.

Post hoc power analysis shows the observed power for language is .985, observed power for sex at birth is .209, observed power for the interaction is .225.

Discussion

Most of our results supported our hypotheses. Our results showed that English speakers' gender stereotypes were not as strong as Chinese speakers' gender stereotypes, but there was no significant difference related to participants' sex at birth.

In Bussey and Bandura's (1999) Theory of Sociocognitive Perspective on Gender, they point out three types of environmental structures (imposed, selected, and constructed environment) and three types of sociocognitive modes of influence (modeling, enactive experience, and direct tuition) that influence the development of gender roles. According to this theory, people form their gender role through both actively learning and passively assimilating from other people and the feedback to them. Based on the different cultures between Mandarin Chinese and English speakers, the different level on gender stereotype may be because of the different sociocognition. Although the feudal regime of China ended in the year 1911, the ideology of 2,000 years of patriarchy still impacts Chinese people today. In contrast, the English speakers are mostly from the United States with a history of assimilating different cultures within different immigrant populations and native Americans for more than two hundred years. The result is that Mandarin Chinese speakers have a stronger gender stereotype level than English speakers fits the view of sociocognitive perspective on gender because the participants form their gender role expectations in different societies with different ideologies.

From the perspective of evolution, Megarry (2001) points out that the differences in body features between males and females existed 2 million years ago in primates, so the division of labor based on sexes could generate evolution on human body (such as hunting makes stronger limbs), but it should not be the origin of gender-based

dimorphism. Some tribes today are still matriarchal such as the Minangkabau tribe in Indonesia (Sudha, 2004) and Mosuo tribe in China (Gong, Yan, & Yang, 2015). Some of the gender roles in matrilineal society are opposite to gender roles in patrilineal society (such as leadership) although both types of societies have developed through a long history. This may indicate that gender-based dimorphism may generate more from social ideology than from biological sex. Our hypothesis states that there might be difference between sexes on gender stereotype based on culture and history, while from the inference of evolutionary view, sex may not be the main reason that leads to the gender difference.

Our result is different from Zhou et al. (2004), who compared American and Chinese college students on gender stereotyped predictions of genders on both people's names and activities (which includes occupations, housework responsibilities and hobbies). They found that Chinese and American college students predicted similar gender roles according to those activities and names. The difference between their results and our results may be because we used different populations. Their data collected from just university students in Joliet (U.S) and Shanghai (China). Shanghai is the biggest city in China, with a multi-cultural population and a role as a global financial hub, while Joliet is a city in Illinois sits 40 miles away from Chicago. There might be a difference on gender-related predictions between metropolitan and medium-sized cities. The economic reforms started in 1979, which accelerated China's economy and opened Chinese people's eyes to the world, affected the 1980s and 1990s generations more than older generations, since young adults may accept things more readily compared to older generations. Also, people who live in the countryside are different from people who live

in cities in China. People living in the countryside are more conservative and old-fashioned than those who live in cities. As our data was collected online, it contains every possibility where these Mandarin Chinese speakers live. They can also vary in terms of age, occupation, education level and in some other demographic aspects. With a more generalized population than that of Zhou and colleagues, we may get different results.

Zhang et al. (2001), also showed that Chinese college students rated themselves with an overall lower level of masculine and feminine traits of the Bem Sex Role Inventory than American college students, regardless of gender (Zhang, Norvilitis, & Jin, 2001). They think this may be because Chinese culture is more conservative; even when people feel strong emotions, Chinese students may tend to report these feelings less than American students. Meanwhile, they found some crossover traits that female students rate higher than male students on some of the masculine traits and vice versa. In fact, only 8 of Bem's (1974) original 20 traits were still valid with their sample. This is partly similar to our result that we also did not find any significant difference between sex at birth and gender stereotype strength, regardless of the different language groups. These results all support Twenge's (1997) analysis of the Bem Sex Role Inventory (1974), through more than twenty years that women have gained more masculine traits during the past decades, diminishing the gender role difference between male and female; this would be a possible explanation of no significant difference found between the sexes.

Limitations and Future Directions

The power for the ANOVA was low for analysis of sex at birth and the interaction. Future attempt should include more participants. One problem of using

variance on each individual to decide whether English speaker or Chinese speaker is more gender stereotyped could be that if a person rates all the activities to one gender, his/her variance would still be small, but that does not necessarily mean the participant has a lower gender stereotype level. Moreover, we were not able to see how people rated each daily life activity. Future analysis can break down each daily life activity to see the gender expectation on different daily life activities and examine whether there is a difference between these activities based on sex, language, and/or other demographics. By comparing the mean score of each activity, we could know more in depth about each group's (male Mandarin Chinese speakers, female Mandarin Chinese speakers, male English speakers, and female English speakers) opinion on each activity.

Second, we did not separate participants' sex and their gender expectation on those daily life activities. It remains a question whether the results come from gender stereotypes or just that people tend to rate others take more responsibility than themselves. Just like Baxter's (1997) result that husbands rated themselves higher on chores done than their wives rated them, we could predict that this kind of inequivalence may also be found in our survey, such as maybe men think women should take more responsibility on chores, while at the same time, women think men should take more responsibility on chores. For sex at birth, the research by Leonard Sax (2002) shows the prevalence of intersex at birth is 0.018%; with this low ratio, we were probably not able to find any person that is intersex at birth in a sample with around 100 participants. Because the participants may not know their sex chromosome, the response to the "sex at birth" item may still be based on how they functioning in a social content. So, further

research could look into the relationship between sex and gender expectation according to different daily life activities.

Moreover, many other factors can affect people's opinion on gender expectation, such as the area they live (rural countryside or big city), social economic status, majors or jobs (such as liberal arts vs. sciences, politicians vs. surgeons), cultural groups (different ethnicities), family configurations, and many more. The data we collected online is varied in aspects other than just university students, people living in one city, or those who have one certain major or job. This kind of data collection brings a broader understanding and variety between the groups, but may lack specificity since the range of the population in the sample is much larger than just in a certain specific group. The demographic results show that parts of the Chinese speakers live in other countries and some English speakers maybe immigrants or from other places. The pace of globalization makes cultures assimilate with each other, and the internet provides people from all over the world share the same information, we can predict that the difference between cultures would be smaller over time. Further study could also seek a more diverse participant sample to minimize sampling error.

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